

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eric L. Barsness et al.

Serial No.: 10/624,852

Filed: July 22, 2003

Group Art Unit: 2625

Confirmation No.: 6557

For: APPARATUS AND METHOD TO ADVERTISE TO THE
CONSUMER BASED OFF A DIGITAL IMAGE

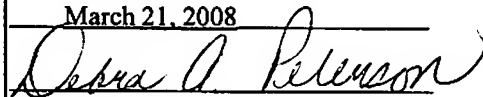
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March 21, 2008



Debra A. Peterson

**APPEAL BRIEF IN SUPPORT OF APPEAL
FROM THE PRIMARY EXAMINER TO THE BOARD OF APPEALS**

This is an appeal of a Final Rejection of claims 1, 5-10, 14-17, 23, and 24 of
Application Serial Number 10/624,852 filed July 22, 2003. This brief is being submitted
pursuant to 37 C.F.R. 1.192. A Notice of Appeal was filed on March 17, 2008.

1. Real Party in Interest

International Business Machines Corporation is the real party in interest.

2. Related Appeals and Interferences

There are no related appeals or interferences pending with this application.

3. Status of Claims

Appellants appeal from the rejection in the November 1, 2007 Office Action of claims 1, 5-10, 14-17, 23, and 24. The claims on appeal are set forth in Appendix A.

4. Status of Amendments

An Amendment-After-Final was filed on January 28, 2008 subsequent to the final rejection of November 1, 2007.

5. Summary of Claimed Subject Matter

As described in the specification at page 5, lines 2-10, the present invention provides an apparatus having at least one processor coupled to a memory, with at least one digital image residing in the memory. An advertising generator also resides in the memory, and is executed by the processor(s). The advertising generator analyzes a selected digital image for one or more consumer identifying characteristics, and generates an advertisement targeted to a consumer based on the consumer identifying characteristic(s). The generated advertisement may take a variety of forms, including but

not limited to: an on-screen display at the phone kiosk, a custom generated coupon, or a photo jacket insert.

Appellants are appealing from the Examiner's rejection of claims 1, 5-10, 14-17, 23, and 24. Claim 1 is an independent claim. Claims 4-9 depend directly from claim 1. Claim 10 is an independent claim. Claim 14 depends directly from claim 10. Claims 15 and 16 depend directly from Claim 14. Claim 17 is an independent claim. Claim 23 depends directly from claim 1. Claim 24 depends directly from Claim 10.

In compliance with 37 C.F.R. § 41.37c(1)(v), a concise explanation of the subject matter defined in independent claims 1, 10 and 17, including references to the specification by page and line number, and to the drawings follow.

Claim 1 describes an apparatus having at least one processor (Fig. 1, 108, and page 9, line 6), a memory coupled to the at least one processor (Fig. 1, 110, and page 9, line 6), at least one digital image residing in the memory (Fig. 1, 112, and page 9, line 2), and an advertising generator residing in the memory and executed by the at least one processor (Fig. 1, 118, and page 9, lines 7-8). The advertising generator analyzes a selected digital image for one or more consumer identifying characteristics (Fig. 4, block 404, and page 13, lines 13-15), then generates an advertisement targeted to a consumer based on the one or more consumer identifying characteristics (Fig. 1, 118 and page 9, lines 22-26). The analyzing of the selected digital image involves object recognition within the selected digital image, text recognition within the selected digital image, and reading consumer characteristic metadata associated with the digital image (Fig. 1, 116, and page 9, lines 18-21).

Claim 10 describes a method for advertising to a consumer based on the content of a digital image associated with the consumer (Fig. 4, 400, and page 13 lines 11-13). The method analyzes the digital image for one or more consumer identifying characteristics (Fig. 4, 404, and page 13, lines 13-15). Analyzing the digital image for one or more consumer identifying characteristics further includes the steps of: performing object recognition within the digital image (Fig. 4, 404, page 13, lines 13-15), performing text recognition within the digital image (Fig. 4, 404, page 13, lines 13-15), reading consumer characteristic metadata associated with the digital image (Fig. 4, 404, page 13, lines 13-15), and generating an advertisement targeted to the consumer based on the one or more consumer identifying characteristics (Fig. 1, 118 and page 9, lines 22-26).

Claim 17 describes a program product which includes an advertising generator (Fig. 1, 118, and page 9, lines 7-8). The advertising generator analyzes a selected digital image for one or more consumer identifying characteristics (Fig. 4, 404, and page 13, lines 13-15). Analyzing the digital image for one or more consumer identifying characteristics further includes the steps of: performing object recognition within the digital image (Fig. 4, 404, page 13, lines 13-15), performing text recognition within the digital image (Fig. 4, 404, page 13, lines 13-15), reading consumer characteristic metadata associated with the digital image (Fig. 4, 404, page 13, lines 13-15), and generating an advertisement targeted to the consumer based on the one or more consumer identifying characteristics (Fig. 1, 118 and page 9, lines 22-26). The program product further includes tangible computer-readable media bearing the advertising generator (Fig. 1, 118, page 9, lines 7-8).

6. Grounds of Rejection to be Reviewed on Appeal

The Examiner has rejected claims 1, 5-10, 14-17, 23, and 24 under 35 U.S.C. § 103 as being unpatentable over McIntyre, U.S. Patent 6,958,821 B1 (hereafter McIntyre) in view of Davis et al., U.S. Patent 6,965,682 B1 (hereafter Davis). The issue is whether the Examiner is correct in asserting that claims 1, 5-10, 14-17, 23, and 24 are obvious under 35 U.S.C. §103(a) over McIntyre in view of Davis.

7. Argument

Rejection under 35 U.S.C. § 103(a)

The McIntyre reference (i.e., U.S. Patent 6,958,821), provides a digital imaging algorithm which can make intelligent advertising decisions by analyzing the image content of consumer digital images (Specification, column 2, lines 14-17). This is achieved by first scanning a hard copy of an image provided by a user to provide a digital image and sending such image to a memory location. Next, the scanned digital image is automatically analyzed to determine the likelihood that material related to products will be of interest to the user by recognizing features which relate to the product of users, such features being selected from the group consisting of product trademarks, product trade dress, and other products which are related to the third party products. Finally, the algorithm selects one or more items of product material based on their likelihood of interest to the user and sending them to the user for display or printing (Specification, column 2, lines 27-40).

The Davis et al. reference (i.e., U.S. Patent 6,965,682) provides a method for employing watermark data as proxies for media objects and associated applications (Abstract). Davis et al. provides a method of processing watermark data as a pointer to shared resources which is sometimes used in lieu of transmitting from point to point the object with which it is associated, thereby gaining efficiencies in speed and bandwidth (Specification, column 1, lines 48-52). As a prime example, Davis discusses, in column 2 lines 30-44, embedding an “index” or link to a location/website as a digital watermark in a lower quality digital image, wherein the “index” or link points to a location wherein a higher quality version of the watermarked image resides and may be obtained:

In accordance with one embodiment of the invention, device 14 receives a better image that that sent from device 12. In one such embodiment, device 14 receives the image data captured by device 12. Device 14 recognizes that the image includes a watermark hidden within the image data and decodes same. The watermark payload includes an Index by which a copy of the image can be accessed from a server 20 on the internet or other storage medium. With this index, the second devices 14 queries the server, which returns the image corresponding to this watermark index (in this case, the advertisement) back to the second device 14. The image provided by the server can be higher resolution or pristine, i.e., it has no artifacts left from scanning at device 12, etc. Such a procedure is shown by the flowchart of FIG. 2. (Davis et al., specification, column 2, lines 30-44).

Appellants respectfully submit that neither of the McIntyre or Davis et al. references provides the key element of independent claims 1, 10 and 17 of “reading consumer characteristic metadata associated with the digital image”. On the bottom of page 4 of the current Office Action, the Examiner admits that McIntyre does not disclose expressly reading consumer characteristic metadata associated with the digital image. Instead, the Examiner states that Davis discloses reading consumer characteristic

metadata associated with the digital image, citing column 2 lines 20-25 and 33-40, column 2 lines 62-column 3 line 14, and column 3 lines 28-37).

Appellants readily admit that digital watermarking technology is a well-known technique for hiding or embedding information (such as metadata) within a digital image (see page 10, lines 15-16 of the present invention). However, the present invention and the Davis reference read and process totally different types of metadata information. As described above, Davis is using the digital watermark in a transmitted image to contain an index or link to a higher resolution version of the same image (or alternatively, a link to richer media content associated with the image, e.g., see col. 3, lines 29-37). When this watermark is embedded within the image, it is the image provider, not the consumer, that decides what information to embed in the image, and none of the information is associated in any way with a consumer characteristic.

Thus, Davis neither discloses nor suggests use of embedded “consumer characteristic” metadata, instead Davis uses the metadata to contain information about the image itself (such as hyperlinks to better quality versions of the digital image). Examples of “consumer characteristic” metadata, as defined by the present invention, include the name and address of the person generating the image (see page 12, lines 19-22). This “consumer characteristic” information enables a merchant to build up a direct mail database of consumers, or even an e-mail distribution list. With this information, the merchant can distribute tailored advertisement to the consumer based on the consumer identifying characteristics captured by the advertising generator. By knowing the name of the consumer, merchants can also create coupons and other advertisements which are addressed specifically to the holder of the coupon (specification, page 12 line 22 to page 13 line 2). Simply stated, the metadata utilized by Davis is “image characteristic” rather than “consumer characteristic” as in the present invention.

For these reasons, Appellants respectfully submit that the McIntyre and Davis references, alone or in combination, neither disclose nor suggest the claimed element of “reading consumer characteristic metadata associated with the digital image,” thus claims 1, 10 and 17 are now submitted as being in condition for allowance.

Claims 5-9, 14-17 and 23-24 rely, either directly or indirectly, from claims 1, 10 and 17 thus claims 5-9, 14-17 and 23-24 are also now submitted as being in condition for allowance.

Appellants' Response to Advisory Action of 2/28/08

In section 1 of the Response to Arguments, the Examiner states, “The reference of Davis was merely used to show that watermarks can be embedded in a digital image and used to store information associated with the digital image and can be extracted and analyzed.” Appellants readily agree with the Examiner that digital watermarks are well-known for hiding and embedding information, such as metadata within a digital image. However, Appellants respectfully submit that the present invention goes beyond the concept of just embedding metadata in a digital image and reading it. The present invention relies on a new type of “consumer characteristic” metadata (i.e., metadata that is specifically associated with the creator of the image, such as the name and address of the person generating the image) (see page 12, lines 19-22). This “consumer characteristic” metadata can directly drive the generation of tailored advertisements to the consumer based on the consumer identifying characteristics captured by the advertising generator.

In contrast to the present invention, the metadata provided by Davis neither discloses nor suggests “consumer characteristic” metadata in any context. Instead, Davis uses the metadata to contain information about the image itself (such as hyperlinks to better quality versions of the digital image). As Appellants have stated before, digital watermarking and the concept of embedded metadata in images has been around for a long while, yet no one has used the metadata to capture consumer characteristics at the time of the image creation, and used the “consumer characteristic” metadata within the image to later direct tailored advertisements to the consumer, based upon the “consumer characteristic” metadata. Thus, Appellants respectfully submit that the present invention’s usage of “consumer characteristic” metadata goes well beyond what is obvious to one of ordinary skill in the art.

8. Claims Appendix

1. An apparatus, comprising:
at least one processor;
a memory coupled to the at least one processor;
at least one digital image residing in the memory; and
an advertising generator residing in the memory and executed by the at least one processor, the advertising generator analyzing a selected digital image for one or more consumer identifying characteristics, and generating an advertisement targeted to a consumer based on the one or more consumer identifying characteristics,
wherein the analyzing of the selected digital image involves object recognition within the selected digital image, text recognition within the selected digital image, and reading consumer characteristic metadata associated with the digital image.
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. The apparatus of claim 1, wherein the apparatus is a photo kiosk.
6. The apparatus of claim 1, wherein the apparatus is a digital minilab.
7. The apparatus of claim 1, wherein the generated advertisement is a screen display.
8. The apparatus of claim 1, wherein the generated advertisement is a coupon.

9. The apparatus of claim 1, wherein the generated advertisement is a photo jacket insert.

10. A method for advertising to a consumer based on the content of a digital image associated with the consumer, the method comprising the steps of:

analyzing the digital image for one or more consumer identifying characteristics, the analysis comprising the steps of:

performing object recognition within the digital image;

performing text recognition within the digital image; and

reading consumer characteristic metadata associated with the digital image; and

generating an advertisement targeted to the consumer based on the one or more consumer identifying characteristics.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. The method of claim 10, wherein the step of generating an advertisement targeted to a consumer based on the one or more consumer identifying characteristics further includes the steps of:

creating a mapping from one or more potential consumer identifying characteristics to at least one associated advertisement.

if at least one consumer identifying characteristic exists within the digital image, identifying at least one associated advertisement to display to the consumer via the mapping; and

presenting the at least one associated advertisement to the consumer.

15. The method of claim 14, wherein the step of presenting the at least one associated advertisement to the consumer comprises the step of:

generating a screen display of the at least one associated advertisement.

16. The method of claim 14, wherein the step of presenting the at least one associated advertisement to the consumer comprises the step of:

printing one or more coupons corresponding to the at least one associated advertisement.

17. A program product comprising:

an advertising generator that analyzes a selected digital image for one or more consumer identifying characteristics, the analysis comprising the steps of: performing object recognition within the digital image; performing test recognition within the digital image; and

reading consumer characteristic metadata associated with the digital image; then generates an advertisement targeted to a consumer based on the one or more consumer identifying characteristics; and

tangible computer-readable recordable media bearing the advertising generator.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. The apparatus of claim 1, wherein the consumer characteristic metadata is provided in the form of a digital watermark.

24. The method of claim 10, wherein the consumer characteristic metadata is provided in the form of a digital watermark.

9. Evidence Appendix

There is no evidence attached for this appeal.

10. Related Proceedings Appendix

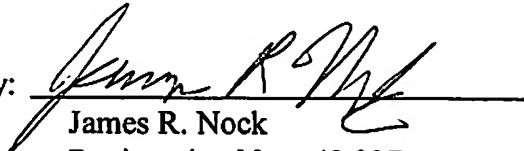
There are no related proceedings. Therefore, there are no copies of decisions rendered by a court of the Board attached here.

Appellants believe this appendix satisfies the requirements of 37 C.F.R. § 41.37(c)(x).

Respectfully submitted,

Date: March 21, 2008

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